Transportation, Materials & Manufacturing

Planes, Trains, and Automobiles

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INTRODUCTION

In this increasingly virtual world, people and products still want to move. This desire for mobility increased when planes, trains, and automobiles displaced animal power. Similarly, the desire for mobility is likely to increase further with exposure to the information highway. Your presence here today, the clothing you wear, and the meals you will eat attest to mobility. A virtual conference would simply not have the same impact. No virtual lobster please!

Mobility is built on standards; some old . . . railroad standards come from Roman roads; wheel ruts which spanned the horse's hind-end. Early automobile standards derived their track from the same source. Other standards are new. Standards for hay-burning transport gave way to standards for transport by petrol. Standards for fuel cell generated electricity will eventually displace petrol power. Time is of the essence in this transformation.

TIME AND STRUCTURE

The auto industry deals with in-car microprocessor events in nanoseconds and driver attention in seconds. Vehicles speed upward of 100 feet per second, trains at 300 feet per second and planes at a 1000 feet per second. The product development cycle approaches thirty months for products lasting ten years or more, using quickly deployed teams. Yet, despite many improvements, the standards system still moves along in furlongs per fortnight in a 24/7 world. It is my premise that this is mainly due to excessive structure.

THE NEW ECONOMY MINDSET

In the movie "Planes, Trains and Automobiles," Steve Martin (a new economy broker) travels by air, rail, and road. He ends up stranded by snow, flood, and mishaps to bunk with John Candy, an old economy shower ring salesman. The point is, even when impaired by weather, new and old economies alike depend on mobility.

The mobility industry has been criticized as stuck in the past . . . despite hi-tech safety, fuel cells, electronics, and polymers. On this point, J. T. Battenberg, CEO of Delphi, refers to the new team on the E-commerce field . . . "the new revolutionaries are from GM, Delta, Wal-Mart," and Ford. The new economy, he says, is a *mindset.* And so it is. Here are some examples:

- Technology is redrawing the Ford global business. I am developing hi-tech solutions to reduce "blind spots" and extend night vision.
- Global external standards are being selected for these technologies.
- Within 5 years, many cars will have telematics capability. Wingcast, the Ford JV with Qualcom, brings digital wireless technology directly into the vehicle.
- Ford.com is the top global automotive website with 124 million visitors last year. These visitors produced $1 billion in new revenue.
- Over 90% of Ford U.S. dealers are on-line; 72% manage sales leads on the web. Last year some 400,000 new leads were handled by our dealers.
- And also, through Covisint, the global supplier exchange, web auctions have generated $1.2 billion in revenue.

As you can see, the web has given us new ways to reach out to suppliers and to markets . . . dealers have adapted and are prospering despite all predictions. Ford and other mobility companies have embraced new economy technology and principles. Dot.com technologies are the means to our end . . . the end is mobility.

THE MOBILE SOCIETY

Society wants reduced energy consumption, lower emissions, lower traffic congestion and more safety. Customers want reduced ownership costs, better performance, more reliability and more comfort. Manufacturing wants shorter time to market and flexible design for product differentiation. Automotive technology mega-trends need standardization, in a timely and efficient manner. For example:

- New power plants, e.g., fuel cells
- Electric components, e.g., A/C
- Intelligent systems, e.g., microprocessor controls
- Light metals and polymers, e.g., magnesium & RRIM
- 42V architecture
- Wireless communication, e.g., telematics.

And these technologies must be 10-year durable, not throw away.

THE STANDARDS DEVELOPMENT INDUSTRY

The standards development industry remains in a furlongs per fortnight world, despite E-gains. Policy, structure, and process require a shift in paradigm. Many companies have headed for the exits; we just don't have the staff to sustain the current hierarchal structure. Here are some indicators:

- ISO fast track has few takers; consortia are winning.
- The structure and process are procedurally level . . . but are not in balance relying as they do on one nation, one TAG and one nation, one vote.
- EU is still too dominant; some kind of weighted TAG structure and voting must be enacted.
- The traditional standards structure is too rule bound . . . reflecting now relaxed antitrust rules from the 1960's and 1970's.
- Some define a "true" standard as having passed muster by a large number of governments. Public policy related to health, safety, and the environment requires government participation; but this model is but out-of-date for technology standards.
- TC22 *paper* ballots are still an option, passing from ISO-ANSI-SAE-TAG, losing time along the way.

Most companies no longer have sufficient staff to work this way—development and voting must be web based. The standards structure today is unsupportable . . . industry cannot commit more people . . . in fact, we will commit less. Standards development policy/structure/process must be streamlined.

SAE LEADING WITH INDUSTRY

Industry leadership at SAE is making the needed changes:

- Have reduced SAE dependence on standards sales to 12% of total revenue.
- Last September, the Technical Standards Board passed the **SAE Paris Protocol:**
  - o "Resolved that effective January 1, 2001, current and new SAE work items include global requirements and be submitted as ISO/IEC or international industry or trade association standards."

The clear intent of the TSB is to further globalize SAE standards development. The larger interests of SAE and the mobility industry require off-setting efficiencies to contain workload caused by the **SAE Paris Protocol**. To that end, SAE TSB will take up at its March Meeting:

- Adding Technical Standards Board members from nations outside the U.S.
- Eliminating a number of standards committees and work groups thereby "right sizing" the structure.
- Reducing (below 40%) the degree to which standards sales support development.

By these actions, we seek to improve SAE global standing, match the number of standards volunteers required to the available resources, and increase SAE market share of professionals in the mobility industry.

SUMMARY

People want mobility with planes, trains, and automobiles, safely, responsibly, and comfortably. Mobility technology requires standards. The formal standards system must change much more; a shift in paradigm is required.

Change starts with modern policy:

- One global standard, one global test, and one global certificate.

Change continues with simple and fair structure:

- Fewer and less hierarchal fixed committees.
- Rapidly deployed, rapidly decommissioned teams.
- Balanced (proportional) TAG influence and voting.

Change finishes with process:

- Web based; no hard copy at any stage.
- Process that needs fewer volunteers.

SAE, in partnership with industry, is acting; we urge you to do likewise.